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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,696	07/29/2004	Kuo-Chung Yee	13184-US-PA	4695

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JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

MATTHEWS, COLLEEN ANN

ART UNIT	PAPER NUMBER
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2811

NOTIFICATION DATE	DELIVERY MODE
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03/27/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USA@JCIPGROUP.COM.TW

Office Action Summary	Application No. 10/710,696	Applicant(s) YEE ET AL.	
	Examiner COLLEEN A. MATTHEWS	Art Unit 2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-14 and 17-21 is/are rejected.
- 7) ☒ Claim(s) 1-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1-9 are objected to because of the following informalities:

Claim 1 lines 11-12 recite “and the glue surrounds the spaces at a side surface **of not** contacting the dielectric substrate and the wafer” it would be clear if it read “and the glue surrounds the spaces at a side surface **not** contacting the dielectric substrate and the wafer”.

Claims 10-14, 17-21 are objected to because of the following informalities:

Claim 10 lines 6-7 recite “wherein glue **containing** a plurality of spacers therein to hold the constant gap” would be clearer if it read “where the glue **contains** a plurality of spacers therein to hold the constant gap”.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-14 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2006/0030074 to Mund et al. (Mund) in view of U.S. Pub. No. 2004/0137723 to Noma et al. (Noma) and U.S. Pat. No. 5,101,099 to Funada et al. (Funada).

Regarding claim 10, Mund discloses a device grinding process comprising the steps of:

providing a wafer (Fig 9 element 312) having a plurality of chip units thereon, wherein the surface of each chip unit has at least a device (element 318);

attaching a dielectric substrate (302) over the device on the surface of the wafer by an amount of glue, such that a constant gap (H') is maintained between the dielectric substrate and the wafer, wherein the glue (314) and the spacers (310) hold the constant gap; and

grinding (paragraph 0111, lines 10) the surface of the dielectric substrate away from the wafer or the surface of the wafer away from the dielectric substrate.

Mund fails to explicitly disclose the grinding of the surface of the dielectric substrate or wafer after attaching a dielectric substrate over the device on the surface of the wafer. Noma discloses a wafer (Figure 1 element 1a) and attaching a dielectric substrate (Figure 2 element 4) and grinding of the surface of the wafer (shown in Figure 2, paragraph [0034]) after attaching the dielectric substrate (4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mund to have the grinding of the surface of the wafer after attaching the dielectric substrate as in Noma in order to have the dielectric substrate provide device support during the grinding process.

Mund also fails to disclose the glue containing a plurality of spacers. Funada discloses providing a wafer (Fig 6 element 10) having a plurality of chip units thereon, wherein the surface of each chip unit has at least a device (element 100); attaching a

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dielectric substrate (20) over the device on the surface of the wafer by an amount of glue (30), such that a constant gap (col 9 lines 35-36) is maintained between the dielectric substrate and the wafer, wherein the glue (30) containing a plurality of spacers (31) therein to hold the constant gap. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mund to have the glue containing a plurality of spacers as in Funada in order to provide adequate support to maintain the constant gap.

Regarding claim 11, Mund as modified discloses where the device comprises a photoelectric device (318).

Regarding claim 12, Mund as modified discloses the photoelectric device grinding process where the photoelectric device comprises an image sensor (Figure 9 element 318, paragraph 0011, line 6).

Regarding claim 13, Mund as modified discloses the photoelectric device grinding process where the photoelectric device comprises a micro-mechanical structure (paragraph 0021 and 0022).

Regarding claim 14, Mund as modified discloses the device grinding process where the micro-mechanical structure (Fig 9, element 318) protrudes from the surface of the wafer (312) by a height smaller than the gap (H') between the dielectric substrate (302) and the wafer (312).

Regarding claim 17, Mund as modified discloses the device grinding process where the spacers are silicon oxide (paragraph 0025 lines 1-3).

Regarding claim 18, Mund as modified discloses the device grinding process where the material constituting the glue is selected from the group of ultraviolet cured plastic and epoxy resin (epoxy; paragraph 0105 line 1).

Regarding claim 19, Mund as modified discloses the device grinding process where the step of grinding the dielectric substrate or the wafer comprises mechanical grinding (paragraph 0111, lines 10).

Regarding claim 20, Mund as modified discloses the device grinding process where the dielectric substrate comprises a glass substrate or silicon substrate (element 302, glass; paragraph 0111 line 1).

Regarding claims 21, Mund as modified discloses the device grinding process where the glue (Figure 9 element 314), each chip unit (312) and the dielectric substrate (302) together form at least a sealed chamber (316) such that the photoelectric device (318) is enclosed within the sealed chamber.

Response to Arguments

Applicant's arguments filed 12/26/2007 with respect to claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COLLEEN A. MATTHEWS whose telephone number is (571)272-1667. The examiner can normally be reached on Monday - Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Gurley can be reached on 571-272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. A. M./
Examiner, Art Unit 2811

/Lynne A. Gurley/
Supervisory Patent Examiner, Art
Unit 2811